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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714				
EXAMINER ODLAND, DAVID E				
ART UNIT		PAPER NUMBER		
2662		10		

DATE MAILED: 12/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/934,021

Applicant(s)

LEUNG ET AL.

Examiner

David Odland

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. The following is a response to the amendments filed on 11/24/2003.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1,2,4,6,7,9,11,12 and 16, are rejected under 35 U.S.C. 102(e) as being anticipated by Raith et al. (USPN number 6,510,515), hereafter referred to as Raith.

Referring to claim 1, Raith discloses a method in a cellular wireless communications system supporting a broadcast service (a broadcast information service is provided in a cellular system (see figure 4 and column 1)), comprised of transmitting a broadcast session on a broadcast transmission channel (broadcast information such as stock information is broadcast to the users (see figures 2 and 4 and column 3)) and transmitting broadcast overhead information corresponding to the broadcast session on an overhead transmission channel (an encryption service key is broadcast on a broadcast control channel, BCCH (see figures 2 and 4 and columns 9 and 10)), wherein the broadcast information includes a broadcast service protocol option (the BCCH information includes characteristics of cells that are candidates for the mobile station to lock on to, thus the information gives the mobiles options as to which cell it should receive the

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broadcast service from (see Diachina et al. (USPN 5,768,276), to which Raith incorporates by reference (see column 4 lines 19-25 of Raith) and column 7 lines 8-15 of Diachina).

Referring to claims 6,11 and 16, Raith discloses a method in a cellular wireless communications system supporting a broadcast service (a broadcast information service is provided in a cellular system (see figure 4 and column 1)), comprised of receiving broadcast overhead information corresponding to the broadcast session on an overhead transmission channel (an encryption service key is broadcast on a broadcast control channel, BCCH (see figures 2 and 4 and columns 9 and 10)), wherein the broadcast information includes a broadcast service protocol option (the BCCH information includes characteristics of cells that are candidates for the mobile station to lock on to, thus the information gives the mobiles options as to which cell it should receive the broadcast service from (see Diachina et al. (USPN 5,768,276), to which Raith incorporates by reference (see column 4 lines 19-25 of Raith) and column 7 lines 8-15 of Diachina), accessing the broadcast session on a broadcast transmission channel (broadcast information such as stock information is broadcast to and accessed by the users of the cellular system (see figures 2 and 4 and column 3)) and using the broadcast overhead information to process broadcast content of the broadcast session (the encryption service key is used to access the broadcast information (see figures 6 and 7 and columns 9-11)). Note, regarding claim 16, Raith discloses requesting broadcast overhead information corresponding to the broadcast session (the mobile station registers with a base station, where after the base station sends the mobile the broadcast service option as discussed above, hence by the mobile registering with the base station the mobile has also requested the broadcast overhead information from that base station (see column 7 of Raith et al. (USPN 5,353,332)). Note, Raith

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incorporates by reference Diachina et al. (USPN 5,768,276) (see column 4 lines 19-25 of Raith), which in turn incorporates by reference Raith et al. (USPN 5,353,332) (see column 7 lines 19 and 20 of Diachina et al.).

Referring to claims 2, 7 and 12, Raith discloses the system discussed above.

Furthermore, Raith discloses that the broadcast service is transmitted by a content server (the broadcast information service is transmitted by a service server (see column 10)), the broadcast service has a corresponding protocol stack having an application layer and a transport layer (the broadcast information is transported through the cellular network and the stock information is displayed to the user of the mobile station thus transport and application protocol layers exist (see figure 4 and column 5)), and the content server independently controls the application layer and the transport layer protocols (what information is displayed to the user and the way this information is sent to the user are separate functions (see figures 2 and 4 and column 3)).

Referring to claim 4, Raith discloses the system discussed above. Furthermore, Raith discloses that during a broadcast transmission updating a portion of the broadcast overhead information (during the broadcasting service the encryption key is updated (see figures 6 and 7 and columns 10 and 11)) and transmitting the broadcast overhead information with the updated portion (the updated encryption key is transmitted to the user (see columns 10 and 11)).

Referring to claim 9, Raith discloses the system discussed above. Furthermore, Raith discloses that during a broadcast transmission receiving updated broadcast overhead information on an overhead transmission channel (during the broadcasting service the encryption key is updated (see figures 6 and 7 and columns 10 and 11)) and processing broadcast content received

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on the broadcast transmission channel using the updated broadcast overhead information (the updated encryption key is transmitted to the user (see columns 10 and 11)).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raith in view of McFadden et al. (USPN 6,614,804), hereafter referred to as McFadden.

Referring to claim 3, 8 and 13 Raith discloses the system discussed above. Raith does not disclose that the broadcast service is transmitted as Internet Protocol data packets. However McFadden discloses a wireless system wherein IP packets are broadcast to clients by a broadcast server (see figure 1 and column 8). It would have been obvious to one skilled in the art at the time of the invention to transmit the service information in IP packets, as taught in McFadden, in the Raith system because doing so would make the Raith system more versatile since it can communicate with other types of users (i.e. IP users), it would also reduce the cost of implementing an entirely new protocol since the IP already exists and lastly, packet based communication protocols are more bandwidth efficient.

6. Claims 5, 10, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raith in view of Birdwell et al. (USPN 6,032,197), hereafter referred to as Birdwell.

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Referring to claims 5, 10 and 14, Raith discloses the system discussed above. Raith does not disclose that the system further comprises a packet data network or that the packet network updates and transmits header compression information. However, Birdwell discloses a system that includes a packet data network and wherein packet headers are compressed and transmitted in a broadcasting system (see abstract and figure 2)). It would have been obvious to one skilled in the art at the time of the invention to include a packet data network, compress the headers and transmit information relating to the compression in the overhead channel of the Raith system, as taught by Birdwell, because doing so would increase the bandwidth efficiency and reduce transmission time delays of Raith which is important since Raith transmits time-sensitive data such as audio and video data (see column 16).

Referring to claim 15, Raith discloses a wireless communications system supporting a broadcast service, the wireless communication system having a plurality of cells, wherein each cell having a base station for communication with multiple mobile stations (a broadcast information service is provided to users of a cellular wireless communications network (see figure 4 and column 1)), the method comprising transmitting a broadcast session on a broadcast transmission channel from one of the at least one base stations to the mobile stations (broadcast information such as stock information is broadcast to mobile users from the base station (see figures 2 and 4 and column 3)), transmitting broadcast overhead information corresponding to the broadcast session on an overhead transmission channel from the at least one of the base stations to the mobile stations (an encryption service key is broadcast on a broadcast control channel, BCCH, to the mobile subscriber from the base station (see figures 2 and 4 and columns 9 and 10)), wherein the broadcast information includes a broadcast service protocol option (the

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BCCH information includes characteristics of cells that are candidates for the mobile station to lock on to, thus the information gives the mobiles options as to which cell it should receive the broadcast service from (see Diachina et al. (USPN 5,768,276), to which Raith incorporates by reference (see column 4 lines 19-25 of Raith) and column 7 lines 8-15 of Diachina), updating header information (during the broadcasting service the encryption key is updated (see figures 6 and 7 and columns 10 and 11)) and transmitting the updated header information on the overhead transmission channel (the updated encryption key is transmitted to the user (see columns 10 and 11)).

Raith does not disclose that the system further comprises a packet data network or that the packet network updates and transmits compressed header information. However, Birdwell discloses a system that includes a packet data network and wherein packet headers are compressed and transmitted in a broadcasting system (see abstract and figure 2)). It would have been obvious to one skilled in the art at the time of the invention to include a packet data network, compress the headers and transmit information relating to the compression in the overhead channel of the Raith system, as taught by Birdwell, because doing so would increase the bandwidth efficiency and reduce transmission time delays of Raith which is important since Raith transmits time-sensitive data such as audio and video data (see column 16).

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raith.

Referring to claim 17, Raith discloses all the limitations of claim 17 (see the rejection of claim 16 above since it has similar limitations), except Raith does not disclose that the method is implemented in software using a computer-readable medium. However, it would have been



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obvious to one skilled in the art at the time of the invention to implement the Raith system in this manner because the developmental costs of a software implementation are less than that of a hardware based implementation. Furthermore, software is easier to upgrade than hardware.

***Response to Arguments***

8. Applicant's arguments filed 11/24/2003 have been fully considered but they are not persuasive. Specifically, the applicant contends on page 7 last paragraph and page 8 lines 13-16 that Raith does not teach transmitting protocol options in the broadcast overhead transmission channel. The Examiner respectfully disagrees. As shown in Diachina et al. (USPN 5,768,276), a Patent to which Raith incorporates by reference (see column 4 lines 19-25 of Raith), Diachina et al. discloses that the BCCH (broadcast control channel) sends information regarding candidate cells for the mobile station to lock on to. Note, the claim limitation must be interpreted in there broadest sense. Therefore, since the mobile stations are sent information regarding the option as to which cell to lock on to and this information is transmitted to the mobile stations in the BCCH channel, Raith does, in fact, teach transmitting protocol options in a broadcast overhead transmission channel.

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Odland, who can be reached at (703) 305-3231 on Monday – Friday during the hours of 8am to 5pm.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached at (703) 305-4744. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist, who can be reached at (703) 305-4750.

deo

December 5, 2003

  
JOHN PEZZLO  
PRIMARY EXAMINER